

# Emergency stops

## Award winning design



### Emergency stops

Choosing the right emergency stop device is vital in order to increase the safety for your personnel and equipment. ABB has a very wide range of emergency stops which all fulfill the IEC 60947-5-5 standard for emergency stop devices.

### Best product award

Our emergency stop series was awarded "Best product" by the well-known magazine P&A, in the category "Ex-shutz & sicherheit" voted by the magazine's readers.

### Modular range

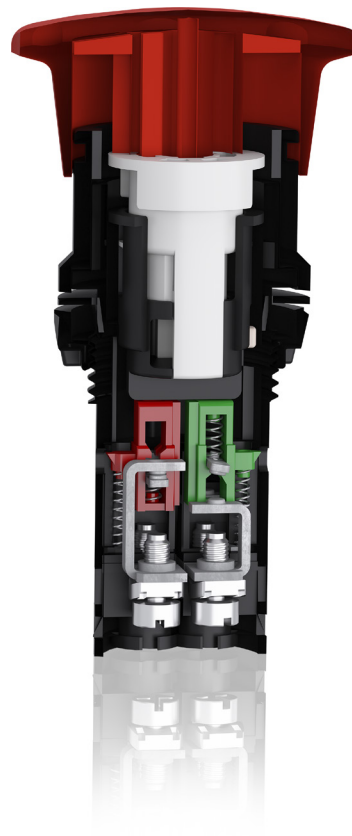
Includes operators, holder, contact blocks, LED blocks and accessories that can be combined with high flexibility.

### Compact range

Features an all-in-one design.

### Accessories

- Emergency stop shroud
- Enclosures
- Legend plates



# Contact us

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Panorama

# Pilot devices Product overview

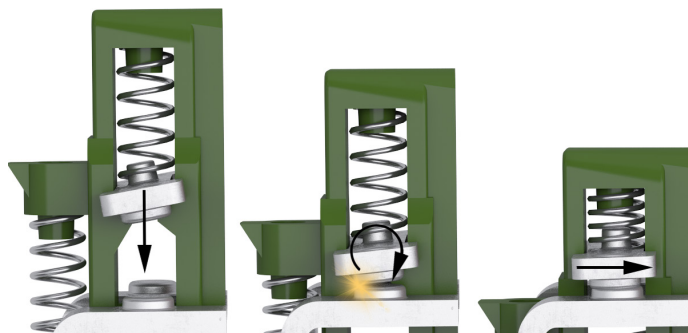
Power and productivity  
for a better world™



# Unique benefits from ABB's pilot devices

## Fast and easy installation

All of ABB's pilot devices are easy to install. Spring-loaded tabs ensure that actuators and legend plates are kept in their correct positions. Our actuators can be used in both notched and round holes and with the modular snap-on design, we provide one of the fastest assemblies on the market.



## L-mark - Customer specific markings made easy

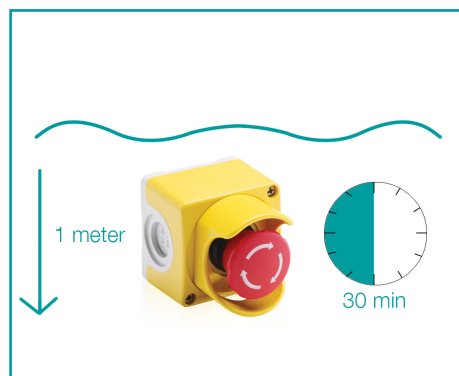
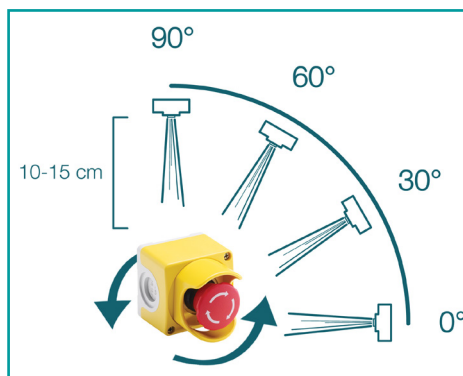
With the L-mark system, custom marking your pilot devices has never been easier, or more fun. In addition to engraving legend plates, we can now laser engrave our entire pilot device offering. With a unique reference number for every marking ordered on the L-mark webpage, reordering is simple and you can be sure to receive the preferred marking every time. Choose from our library of markings or customize your own.

## Long-lasting contact function

With a wiping action, the contact blocks for both the compact and the modular devices are kept clean. While operating, the moving contact rolls over and slides sideways when touching the fixed contact. This ensures a long-lasting and clean contact function also in low-energy applications. With the long service life of our pilot devices, fewer replacements are required and you ultimately save time and money.

## For more information visit:

<http://bolservices.it.abb.com/pilot-devices>



## Tough and robust according to IP69K

The IP69K certification was initially developed for applications that need regular intensive cleaning (dump trucks, cement mixers, etc.). ABB's compact pilot devices are certified according to IP69K meaning you do not have to worry about treating them rough. Spray them with water or leave them out in the snow. They will stay reliable and functional.

## Waterproof according to IP67

ABB's pilot devices are perfect for tough environments where a waterproof enclosure is required. Our entire compact line and parts of the modular line are approved according to IP67. The products are protected against the effects of temporary immersion in water, one meter down, for up to 30 minutes.



# Modular range

## Designed for flexibility and quick assembly

### Modular range pilot devices, 22 mm



**Pushbuttons**  
flush and extended buttons,  
maintained and momentary,  
illuminated and non-illuminated



**Mushroom pushbuttons**  
Ø 40 mm and Ø 60 mm, momentary,  
illuminated and non-illuminated



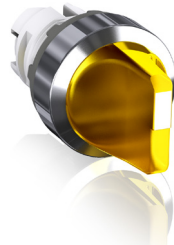
**Key operated selector switches**  
2 and 3 position, several key codes



**Pilot lights**  
with integrated LED blocks, Ba9  
sockets for LEDs or filament bulbs



**Double pushbuttons**  
with two flush buttons  
or with extended lower button.  
Illuminated or non-illuminated



**Selector switches**  
2 and 3 position short and long handle  
maintained and momentary, illuminated  
and non-illuminated



**Toggle switches**  
2 and 3 position maintained  
and momentary



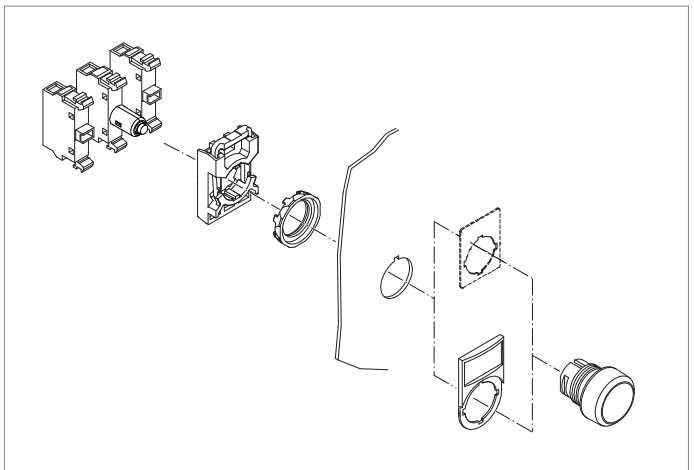
**Joysticks**  
with and without latching function, 2  
and 4 position, maintained and spring  
return

### Modular range – The flexible range

- Made for tough environments
- Wiping action secures contact function
- IP66, UL type 1, 3R, 4, 4X, 12 and 13
- Fast and easy installing
- Widest range of integrated LEDs

ABB's extensive modular range is well-known for its flexibility and robustness. A few high-quality, basic components, can be combined to configure a large number of different devices – all with the same high quality, meeting your exact needs.

In addition to traditional operators like pushbuttons, selector switches, emergency stops and pilot lights, ABB also offers a wide range of special function devices such as machine stops, joysticks, toggle switches, buzzers, definite purpose pushbuttons, potentiometers and reset buttons.



# Compact range and additional products

## All in one design

### Compact range pilot devices, 22 mm



**Pushbuttons**  
flush and extended buttons,  
momentary and maintained,  
illuminated and non-illuminated



**Selector switches**  
2 or 3 position, short handle,  
maintained and momentary



**Pilot lights**  
with integrated LED  
or Ba9 sockets



**Compact mushroom**  
mushrooms in several colors  
with heavy duty design

### Additional products

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**Heavy duty pushbuttons**  
with 30 mm mounting hole



**Buzzers**  
wide range of voltages, both  
continuous and pulsing sound,  
illuminated and non-illuminated,  
different colors



**Reset pushbuttons**  
flush or extended button,  
with or without shaft



**Potentiometers**  
with or without resistor,  
5 ohm, 10 ohm and 50 ohm

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### Compact range – The competitive alternative to traditional modular series

- Robust all-in-one design
- Wiping action secures contact function
- IP66 and IP67
- IP69K
- UL type 1, 3R, 4, 4X, 12, 13
- Fast mounting
- Pilot lights with integrated LED as an option
- Low built-in depth

The compact range is an “all-in-one” alternative to traditional modular products. Very price competitive, without compromising reliability or quality.

The all-in-one design makes everything easier; all functionality condensed into one single unit means each item has an individual ordering number. This simplifies selection and ordering of the product. The compact range includes pushbuttons, selector switches, emergency stops and pilot lights and has the same front design as our modular range, allowing for combinations between the two.

### Segments and applications required IP67 and IP69K rating

- Food processing
- Pharmaceutical
- Petrochemical
- Waste treatment
- Bottling
- Trucking/transportation
- Water/waste water processing

# Emergency stops

## Award winning design

### Emergency stops in modular and compact range



**Modular range - Emergency stops**  
Ø 30 mm, Ø 40 mm, Ø 60 mm, twist release, pull release, key release, illuminated and non-illuminated



**Compact range - Emergency stops**  
Ø 30 mm and Ø 40 mm, twist release, pull release and key release

### Emergency stops

The emergency stops are designed for tough industrial environments. These robust pieces are approved according to IEC 60947-5-5 and meets protection degree IP66 (C-type IP67 and IP69K) on the front side and IP20 on the terminal side. They are also approved according to UL type 1, 3R, 4, 4X, 12 and 13. This competitive and wide range was awarded the "Best Product" award by the readers of the well-known German magazine P&A.

Emergency stop test IEC60947-5-5	
Durability test	6050 cycles. This is not a test of mechanical life. The product has a mechanical life of 100 000 operations.
Robustness	Test force, 113 N applied in three axes
Conditioning	Heat and cold, moist, dry and salty atmosphere
Shock	15 g shock (equivalent to 150 m/s²)
Vibration	2 h at max. acc. 50 m/s², 10 - 500 Hz
Opening test	Impulse voltage test at 2 500 V
Latching test	With 1.6 kg hammer
Resetting test	Pulling force < 50 N, turning torque < 1 Nm
Impact test	Three strikes with 1.6 kg hammer
Electrical tests	Acc. to utilization category AC15 and DC13
Contacts with positive opening operation	Acc.to annex K § 5.2

### Machine stops

The mushroom machine stops have the same design as the emergency stop, except for the color. The products have passed the same tests but do not, due to the black color, fulfill the requirements for emergency stop pushbuttons. Machine stops are used by customers when a robust and reliable stop is needed but an emergency stop is not required.



**Machine stops - Modular range**  
Ø 30 mm and Ø 40 mm, twist release, pull release and key release.



**Machine stops - Compact range**  
Ø 30 mm and Ø 40 mm, twist release, pull release and key release.

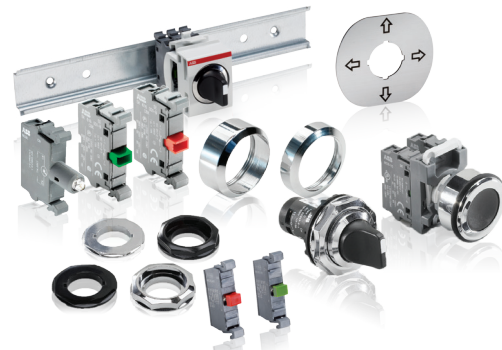
# Other offerings

## Signal towers and signal beacons



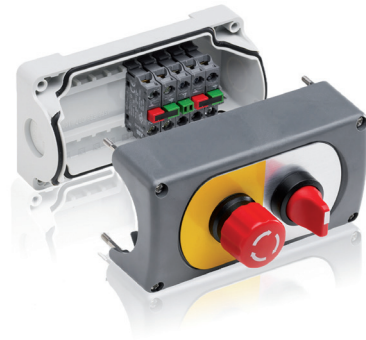
Wide range with a number of functions with light and sound

## Accessories and pilot devices, 30 mm



Wide range of accessories

## Enclosures and stations



### Plastic enclosures - Modular range

Up to five base mounted contact blocks/operator, available in yellow and grey



### Plastic enclosures - Compact range

1-seat, IP69K, available in yellow and grey

## A solution for every signaling field

The modular 70 mm signal tower system offers a wide range of optical and audible elements in all common voltages. A bayonet mechanism allows the components to be mechanically and electrically connected within seconds. Up to 5 signaling elements can be combined per station and the protection degree is IP54. The vandal proof design of the signal beacons mean they can withstand all mechanical and natural challenges indoors and outdoors. The protection degree is IP65.

## Enclosures for modular and compact range

### Plastic (1, 2, 3, 4, 6-seat)

- Rear mounted contact blocks (DIN-rail)
- Up to 5 blocks/actuator
- UL type: 1, 3R, 4, 4X, 12 and 13. IP 66

### Metallic (1, 2, 3, 4, 6-seat)

- IP 66, 67, 69K
- Aluminium

### Compact plastic 1-seat

- UL type: 1, 3R, 4, 4X, 12 and 13. IP 66, 67, 69K
- One of the smallest on the market

## To make both the modular and compact range even more flexible

ABB offers a wide range of accessories such as

- Legend plates and text caps with or without text or symbols
- Protective covers and membranes
- Shrouds
- Bezels
- Widest range of integrated LEDs on the market
- Gold plated contact blocks
- Double contact blocks
- Adaptors for assembly of 22 mm pilot devices in 30 mm diameter holes, available in plastic and metal versions
- Assembly tools and lamp changing tools
- DIN-rail adaptors
- Blanking plugs

## Contact blocks/lamp blocks

ABB has the widest range of lamp blocks with integrated LEDs on the market. The micro switch blocks are perfect for low-energy applications such as PLC, and perform down to 3 VDC, 1 mA and with minimal contact bouncing.